

WHAT IS CLAIMED IS

1. A composition comprising at least one human papillomavirus (HPV) peptide, the peptide comprising an isolated, prepared epitope consisting of a sequence selected from the group consisting of the sequences set out in Tables VII-XVIII that show a relative binding ratio of 0.01 or higher for at least one allele-specific HLA molecule.

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2. A composition of claim 1, wherein the epitope is joined to an amino acid linker.

3. A composition of claim 1, wherein the epitope is admixed or joined to a CTL epitope.

4. A composition of claim 1, wherein the epitope is admixed or joined to an HTL epitope.

5. A composition of claim 4, wherein the HTL epitope is a pan-DR binding molecule.

6. A composition of claim 1, further comprising a liposome, wherein the epitope is on or within the liposome.

7. A composition of claim 1, wherein the epitope is joined to a lipid.

8. A composition of claim 1, wherein epitope is a heteropolymer.

9. A composition of claim 1, wherein the epitope is a homopolymer.

10. A composition of claim 1, wherein the epitope is bound to an HLA heavy chain,  $\beta$ 2-microglobulin, and streptavidin complex, whereby a tetramer is formed.

11. A composition of claim 1, further comprising an antigen presenting cell, wherein the epitope is on or within the antigen presenting cell.

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12. A composition of claim 11, wherein the epitope is bound to an HLA molecule on the antigen presenting cell, whereby when a cytotoxic T lymphocyte (CTL) that is restricted to the HLA molecule is present, a receptor of the CTL binds to a complex of the HLA molecule and the epitope.

13. A composition of claim 11, wherein the antigen presenting cell is a dendritic cell.

14. A composition comprising one or more peptides, and further comprising at least two epitopes, wherein one of the epitopes is selected from the group consisting of sequences set out in Tables VII-XVIII that show a relative binding ratio of 0.01 or higher for at least one allele-specific HLA molecule; and

wherein each of said one or more peptides comprise less than 50 contiguous amino acids that have 100% identity with a native peptide sequence of human papilloma virus (HPV) strains 16, 18, 31, 45, 33, and 56.

15. A composition of claim 14, wherein one peptide comprises the at least two epitopes.

16. A composition of claim 14, wherein at least one of the one or more peptides is a heteropolymer.

17. A composition of claim 14, wherein at least one of the one or more peptides is a homopolymer.

18. A composition of claim 14, further comprising an additional epitope.

19. A composition of claim 18, wherein the additional epitope is derived from a tumor associated antigen.

20. A composition of claim 18, wherein the epitope is joined to a cytotoxic T lymphocyte (CTL) epitope.

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21. A composition of claim 18, wherein the epitope is joined to a helper T lymphocyte (HTL) epitope.
22. A composition of claim 21, wherein the HTL epitope is a pan-DR binding molecule.
23. A composition of claim 14, further comprising a liposome, wherein the epitope is on or within the liposome.
24. A composition of claim 14, wherein the epitope is joined to a lipid.
25. A composition of claim 14, further comprising an antigen presenting cell, wherein the epitope is on or within the antigen presenting cell.
26. A composition of claim 25, wherein the epitope is bound to an HLA molecule on the antigen presenting cell, whereby when a cytotoxic lymphocyte (CTL) that is restricted to the HLA molecule is present, a receptor of the CTL binds to a complex of the HLA molecule and the epitope.
27. A composition of claim 25, wherein the antigen presenting cell is a dendritic cell.
28. A composition of claim 14, further comprising an additional peptide admixed with the one or more peptides.
29. The composition of claim 28, wherein the additional peptide comprises a CTL or HTL epitope.

30. A vaccine composition comprising:  
a unit dose of a peptide that comprises less than 50 contiguous amino acids that have 100% identity with a native peptide sequence of human papilloma virus (HPV) strains 16, 18, 31, 45, 33, and 56, the peptide comprising an epitope selected from the group consisting of sequences set out in Tables VII-XVIII that show a relative binding ratio of 0.01 or higher for at least one allele-specific HLA molecule; and;  
a pharmaceutical excipient.
31. A vaccine composition in accordance with claim 30, further comprising an additional epitope.
32. A vaccine composition of claim 31, wherein the additional epitope is a PanDR binding molecule.
33. A vaccine composition of claim 30, wherein the pharmaceutical excipient comprises an adjuvant.
34. A vaccine composition of claim 30, further comprising an antigen presenting cell.
35. A vaccine composition of claim 34, wherein the epitope is bound to an HLA molecule on the antigen presenting cell, whereby when a cytotoxic T lymphocyte (CTL) that is restricted to the HLA molecule is present, a receptor of the CTL binds to a complex of the HLA molecule and the epitope.
36. A vaccine composition of claim 35, wherein the antigen presenting cell is a dendritic cell.
37. A vaccine composition of claim 30, further comprising a liposome, wherein the at least one epitope is on or within the liposome.